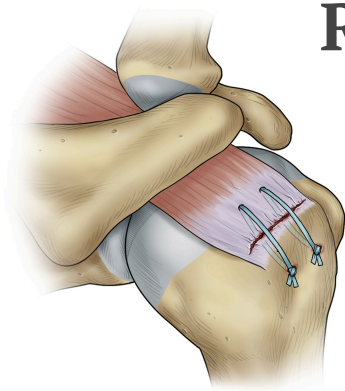




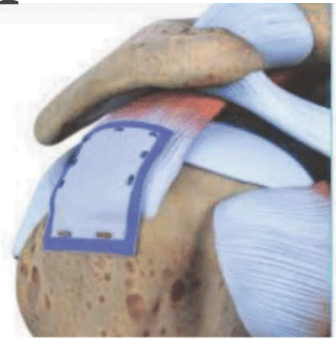
Rotator Cuff Repair

Transosseous Technique

+/- RBI

Rehabilitation Protocol

Paul B. Roache MD



Phase IA: Home Exercise Program – immediate post-op phase

- Days 2 - 14 after surgery
- First step before starting ROM kit and PT

<u>GOALS:</u>	<u>PRECAUTION:</u>
1. Protect the surgical site 2. Ensure wound healing 3. Diminish pain and inflammation 4. Prevent stiffness and regain motion	1. Do NOT lift objects more than 2 lbs. 2. Do NOT reach behind you. 3. Do NOT externally rotate the shoulder. 4. Do NOT use hands to support body weight (Ex. pushing up from chair/bed) 5. Do NOT actively elevate the shoulder/arm

SLING: Wear the sling for roughly 6 weeks after surgery. Continue public use for safety.

1. You can remove sling **4-5 times a day to do home exercises**
2. You will wear sling to sleep to help with comfort and protect shoulder

ICE: Use ice machine 20 minutes on, 20 minutes off, repeat, every hour.

ACTIVITIES: You may use the hand of the surgery arm in front of your body at waist level. You can bend your elbow and move your wrist to help movement and circulation

1. Home exercise program (HEP) starts day 2: ***pendulum, elbow and wrist exercises***

Pendulum Exercise

Remove your sling, bend over at the waist and let the arm hang down. Without using your body to initiate movement, swing the arm gently forward, backward, and in a circular motion. Use a small circle the size of a small dinner plate.



Phase IB: 10 - 14 days postop

- Continue pendulum, elbow, and wrist exercises
- ***Add scapula exercises***

Scapula Retraction/Pinches and Shoulder Shrugs

While standing, pinch shoulder blades backward and together. In the same position, raise shoulder blades to ears to shrug your shoulders.



Pendulum exercises	2 minutes	1-2 sets
Elbow and wrist stretches	5-10 reps	1-2 sets
Scapula retraction*	5-10 reps	1-2 sets
Shoulder shrug*	10-15 reps	1-2 sets

Phase IC: 2.5 / 3 - 6 weeks postop

- ***Add forward flexion and table stretch at ~3 weeks***
- ***Add external rotation using equipment at ~5 wks***
- **At 3 weeks: HEP checkin, initial motion measurements with physical therapist**
- **Avoid lifting arm away from the side**

Pulley Passive Forward Flexion

Sit in a chair with your back against the door with the pulley overhead. Use the non-surgery arm to pull down the handle and passively lift the surgery arm overhead. It will be easier to start with the surgery arm bent at the elbow, then transition to straightened out.



Supine Passive Forward Flexion

Lie on your back. Hold the surgery arm at the elbow with the opposite hand and assist lifting the surgery arm upward towards overhead. Slowly lower the arm back to the bed. Alternatively, you can also use the shoulder wand as well.



Table Stretch

Place your hands slightly wider than shoulder width on a table. Gently push your palms into the table and lean forward. You can use the chair to slide back and feel the stretch. **HOLD THE STRETCH FOR 2 MINUTES.** You will feel some stretch discomfort. As you complete more, you will be able to move further and further back and down.



Supine / Standing External Rotation

Lie on your back or stand with back against the well. Keep elbow of the surgery arm at your side and bent 90 degrees holding the wand. Using the wand in the non-surgery hand, push towards the surgery side so it rotates out. Hold for 10 seconds, relax, and repeat.



Pendulum exercises	2 minutes	1-2 sets
Elbow and wrist stretches	5-10 reps	1-2 sets
Scapula retraction	5-10 reps	1-2 sets
Shoulder shrug	10-15 reps	1-2 sets
Table stretch in forward flexion* @ ~ 3 weeks	2 minute hold	1 set
Pulley forward flexion* @ ~ 3 weeks	10-20 reps	1-2 sets
Supine wrist assisted forward flexion* @ ~ 3 weeks	5-10 reps	1-2 sets
Supine / standing external rotation with wand* @ ~5 weeks	10-15 reps	1-2 sets

Phase II: Intermediate Phase = Motion Recovery (6-8 weeks post-op)

- **PHYSICAL THERAPY** will typically start around 6 weeks after surgery.
 - PT SHOULD NOT HURT. Do not force excessively painful motions*
 - Start x1 / wk. Advance to x2 / wk as progress is tolerated.
- **Stop sling use at 6 weeks if not already discontinued.**
- Limit active ROM elevating the shoulder to the front
- **Avoid lifting your arm away from the side** until 6-7 weeks

Goals:

1. Restore non-painful range of motion
2. Prevent muscular atrophy and muscular inhibition
3. Decrease pain/inflammation
4. Improve postural awareness
5. Minimize stress to healing structure
6. Independent with activities of daily living
7. Wean from sling use at home if not already discontinued.

ACTIVITIES:

1. Start weaning out of the sling. You can continue to wear in public for safety.
2. Continue to ice on a regular basis
3. It should be ok to drive at this point, unless instructed otherwise.
4. You can actively use the arm for daily living: bathing, dressing, driving, typing, etc.
5. No lifting over 5 lbs.
6. No pushing up from the bed/chair or pulling heavy doors.

Range of Motion:

- PROM (non-forceful flexion abduction)
- Active assisted range of motion (AAROM)
- AROM
- Internal rotation to the back
- Table stretch, pulley motion, and wand shoulder exercises

Strengthening:

- Isometrics: Scapular musculature and deltoid. No targeted cuff strengthening yet.

Manual Treatment:

- Joint mobilization to improve/restore arthrokinematics if indicated
- Joint mobilization for main modulation

Phase III: Active Strengthening Phase (12+ weeks)

Goals

1. Improve strength, power, endurance, and neuromuscular control
2. Prepare patient to begin to throw, and perform similar overhead activities
3. Prepare worker for return to work functions

PRECAUTION: Caution with lifting and repetitive motions, progress as tolerated.

Criteria to progress to this phase:

1. Full painless ROM
2. No pain or minimal tenderness on exam

Once patient has full pain free/minimal pain ROM and no tenderness, may progress to:

Strengthening:

- Initiate isotonic program with dumbbells
- Strengthen shoulder musculature - isometric, isotonic, proprioceptive neuromuscular facilitation (PNF)
- Strengthen scapulothoracic musculature - isometric, isotonic, PNF
- Initiate upper extremity endurance exercises

Exercises:

- Continue dumbbell strengthening (rotator cuff and deltoid)
- Progress theraband exercises to 90/90 position for IR and ER

Slow/Fast Sets

- Theraband exercises for scapulothoracic musculature and biceps
- Plyometrics for rotator cuff
- PNF diagonal patterns
- Isokinetics

- Continue endurance exercises (UBE)
- Diagonal patterns

Phase IV: Return to Work / Sport (24 weeks+)

Goals:

1. Improve strength, power, and endurance
2. Worker to return to daily work functions; athlete able to throw and/or perform similar overhead activities / specific sport activities;

ACTIVITIES:

1. Caution with lifting and repetitive motions; progress as tolerated
2. Continue rotator cuff specific strengthening exercises
3. Advance as tolerated in gym exercises